



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: David Norris and David N. Suggs  
Assignee: Advanced Micro Devices, Inc.  
Title: WAVETABLE AUDIO SYNTHESIZER DIGITAL SIGNAL PROCESSOR ARCHITECTURE (AS AMENDED)  
Serial No.: 09/352,659 Filed: July 6, 1999  
Examiner: Not assigned Group Art Unit: Not assigned  
Atty. Docket No.: M-4808-3C US Client Ref.: TT0451 C3

San Jose, California  
February 4, 2000

COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

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Dear Sir:

Pursuant to the guidelines for Information Disclosure Statements, 37 C.F.R. §§ 1.97-1.98, attached hereto is PTO Form 1449 (11 sheets) with references listed for consideration by this office. In accordance with 37 C.F.R. § 1.98(a), copies of the listed references are being provided.

In addition, citation of the above documents shall not be construed as:

1. an admission that the documents are necessarily prior art with respect to the instant invention;
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## REMARKS

The following references listed on PTO Form 1449 were cited, are of record, or otherwise pertain to U.S. patent application Serial Nos. 08/333,389 (now abandoned); 08/333,398 (now abandoned); 08/333,461 (now abandoned); 08/333,536 (now U.S. Patent No. 5,659,466); 08/333,562 (now U.S. Patent No. 5,742,695); 08/333,564 (now U.S. Patent No 5,668,338); 08/334,462 (now abandoned); 08/334,463 (now abandoned); 08/399,951 (now abandoned); 08/516,052 (now U.S. Patent No. 5,753,841); 08/604,558 (now abandoned); 08/947,728 (now U.S. Patent No. 5,847,304); and International Patent Application Serial No. PCT/US95/14254. These patent applications are assigned to Advanced Micro Devices, Inc. ("AMD"), the assignee of the above-identified patent applications, and are technically related to the present application.

### For U.S. Patent Application Serial No. 08/333,389 (now abandoned)

1. Patent 5,144,676, Rossum (9/92)
2. EP Patent 0,535,839, Hetherington (4/93)
3. Patent 5,187,314, Kunimoto et al. (3/96)
4. Patent 5,406,022, Kobayashi (3/96)
5. Patent 4,731,851, Christopher (3/96)
6. Patent, 4,471,681, Nishimoto (3/96)

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7. Patent 4,953,437, Starkey (9/90)
8. Patent 5,300,724, Medovich (4/94)
9. Patent 3,982,070, Flanagan (10/95)
10. Patent 4,384,170 Mozer et al. (10/95)

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11. Patent 5,166,464, Sakata, et al (11/92)
12. John Snell, "Design a Digital Oscillator Whih Will Generate Up to 256 Low Distortion Sine Waves in Real Time," April 1977, pp.4-25

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18. Patent 4,539,885, Ezawa (9/85)  
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22. Patent 4,864,625, Hanzawa (9/89)  
23. Patent 5,111,530, Kutaragi, et al (5/92)  
24. Patent 5,218,710, Yamaki, et al (6/93)  
25. Patent 5,530,862, Jones, et al. (6/96)  
26. Patent 5,613,147, Okamura, et al (3/97)  
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28. Patent 4,133,242, Nagai, et al (1/79)  
29. Patent 4,472,993, Futamase, et al (9/84)  
30. Patent 4,506,579, Rossum (3/85)  
31. Patent 4,569,268, Futamase, et al (2/86)  
32. Patent 4,719,833, Katoh, et al (1/88)  
33. Patent 4,843,938, Hideo (7/89)  
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46. "SC18050 Aria Basic Sound ROM," Sierra Semiconductor, Rev. 0.91, pp. 1-3 (Date not available).
47. "SC18051 1/2 Megabyte Sound ROM," Sierra Semiconductor, Rev. 1.0, pp. 1-3 (Date not available).
48. "SC18052 1 Megabyte Sound ROM," Sierra Semiconductor, Rev. 1.0, pp. 1-3 (Date not available).
49. "YMF262, FM Operator Type L3 (OPL3)," Yamaha LSI, Catalog No. LSI-4MF2622, pp. 1-19 (1991.10).
50. "YMZ263, Multimedia Audio & Game Interface Controller (MMA)," Yamaha LSI, Rev. 7/1/92, pp. 1-33.
51. Application Note, "A Tutorial on MIDI and Music Synthesis, Music Synthesis," by Jim Heckroth, Crystal Semiconductor Corp., AN27REV1, pp. 1-6 (Aug. 1993).
52. Application Note, "Wave Table MIDI Synthesizer Solutions, CS8905 and CS9203," by Jim Heckroth, Crystal Semiconductor Corp., AN26REV1, pp. 1-7 (Aug. 1993).
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57. Documentation regarding AVS Group NXPR016 Chipset (Date not available).
58. ES 5506 "OTTO", Ensoniq Soundscape™ WaveTable Synthesizer, Rev. 2.1, pp. 1-48 (Date not available).
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64. Preliminary Product Information, "CDBGMR4 Music Synthesis Eval. Board," Crystal Semiconductor Corp., DS127PP1, pp. 1-24 and schematics (Aug. 1993).
65. Preliminary Product Information, "Programmable Music Processor, CS8905," Crystal Semiconductor Corp., DS116PP1, pp. 1-19 (Aug. 1993).
66. Preliminary specification, "Stereo continuous calibration DAC, TDA1545A," Phillips Semiconductors, pp. 4-212 to 4-229 (March 1993).
67. Preliminary, "YMF278-F (OPL4), 4 Operator FM and WAVE Synthesis Chip," Yamaha LSI, Yamaha Corp., Catalog No. LS1278F, Version 1.01 (2/1/93), pp. 1-
68. U.S. Patent Application Serial No. 072,838, entitled "Wave Table Synthesizer," by Travers, et al.

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69. Patent 4,344,347, Faulkner (8/82)
70. Patent 4,201,109, Kitagawa (1/96)
71. Patent 4,524,668, Tomisawa et al. (1/96)

For U.S. Patent Application Serial No. 08/516,052 (now U.S. Patent No. 5,753,841)

72. Patent 4,644,840, Franz, et al.(2/87)
73. Patent 5,393,926, Johnson (2/94)
74. Patent 5,418,321, Keller et al. (5/95)
75. Patent 5,442,127, Wachi, et al. (8/95)

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76. EP A0 474177 (3/91)
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78. Patent 4,508,001, Suzuki (4/85)

For International Patent Application Serial No. PCT/US95/14254

79. Patent 5,111,727, Rossum (5/92)
80. Patent 5,342,990, Rossum (8/94)
81. EPAO 126,962, Wersi Electronic GMBH & CO KG (12/5/84)
82. EPAO 463,411, Casio Computer Co., Ltd (1/2/92).

All necessary copies of the above-identified references are provided in three categories:

(i) U.S. patents; (ii) international patents and applications; and (iii) other documents. The U.S.

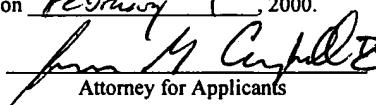
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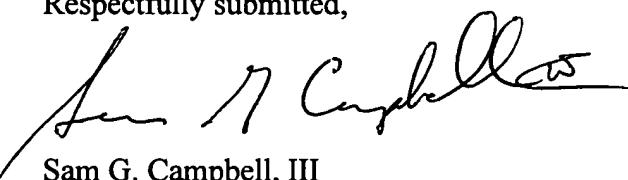
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and international patents are organized by lowest to highest patent number. The "other documents" are organized alphabetically by the first named author.

Applicants respectively submits that the invention in the above-identified application distinguishable over the references know to Applicant and disclosed in the above-statement.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231,	
on <u>February 4</u> , 2000.	
	<u>2/4/00</u>
Attorney for Applicants	Date of Signature

Respectfully submitted,



Sam G. Campbell, III  
Attorney for Applicants  
Reg. No. 42,381

U.S. Department of Commerce, Patent and Trademark Office				Atty Docket No.	Serial No.
				M-4808-3C US	09/352,659
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use several sheets if necessary)</i>				Applicant(s)	
				Norris, David E.; Suggs, David N.	
				Filing Date	Group
				July 6, 1999	Unknown
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*Examiner Initial	Document Number	Date	Name	Class	Subclass
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	AC 4,133,242	Jan. 1979	Nagai, et al	84	1.13
	AD 4,201,105	May 1990	Alles	84	1.01
	AE 4,201,109	May 1990	Kitagawa	84	1.26
	AF 4,344,347	Aug. 1982	Faulkner	84	1.26
	AG 4,384,170	May, 1983	Mozer, et al.	179	1
	AH 4,471,681	Sept. 1984	Nishimoto	84	1.23
	AI 4,472,993	Sept. 1984	Futamase, et al	84	1.24
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	AO 4,573,389	Mar. 1986	Suzuki	84	126
	AP 4,622,877	Nov. 1986	Strong	84	1.01
	AQ 4,644,840	Feb. 1987	Franz, et al	84	1.01
	AR 4,649,783	Mar. 1987	Strong, et al	84	1.01
	AS 4,719,833	Jan. 1988	Katoh, et al	84	1.01
	AT 4,731,851	Mar. 1988	Christopher	381	104
	AU 4,843,938	July 1989	Hideo	84	1.19
	AV 4,864,625	Sep. 1989	Hanzawa, et al	381	61
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							Translation
		Document	Date	Country	Class	Subclass	Yes
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	BZ	"Designing Multi-Channel Reverberators," by John Stautner and Miller Puckette, pp. 569-582 (1989).
	CA	"JAZZ16™ CHIPSET," Media Vision, Inc., pp. 1-52, 1-22, 1-14, schematics, bill of materials, and p. 23 (Date not available)
	CB	"Musical Applications of Microprocessors," by Hal Chamberlin, Hayden Book Company, Second Edition (1985), Chapters 1, 2, 4, 13, 14, 17 and 19-21.
	CC	"OPL3, YMF262, FM Operator Type L3," Yamaha LSI, YMF262 Application Manual, Catalog No. LSI-6MF2622, pp. 1-31 (1992.4)
	CD	"Proposal for Standardized Audio Interchange Formats," IMA Compatibility Project, Version 2.12 (April 24, 1992), pp. 1-23.
	CE	"SC18000/SC18005 Multimedia System Controller," Sierra Semiconductor, Rev. 0.92, pp. 1-23 (Date not available).
	CF	"SC18025 ARIA™ Sound Processor," Sierra Semiconductor, Rev. 1.0, pp. 1-15 (Date not available).
	CG	"SC18050 Aria Basic Sound ROM," Sierra Semiconductor, Rev. 0.91, pp. 1-3 (Date not available).

	CH	"SC18051 1/2 Megabyte Sound ROM," Sierra Semiconductor, Rev. 1.0, pp. 1-3 (Date not available).
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	CJ	"YMF262, FM Operator Type L3 (OPL3)," Yamaha LSI, Catalog No. LSI-4MF2622, pp. 1-19 (1991). <span style="float: right;">27</span>
	CK	"YMZ263, Multimedia Audio & Game Interface Controller (MMA)," Yamaha LSI, Rev. 7/1/92, pp. 1-33.
	CM	Application Note, "A Tutorial on MIDI and Music Synthesis, Music Synthesis," by Jim Heckroth, Crystal Semiconductor Corp., AN27REV1, pp. 1-6 (Aug. 1993).
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	CV	Integrated Circuit Systems, Inc., Digital Sound Generator (DOC II), ICS1399, Package of Technical Information (Date not available).
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	CX	Preliminary Product Information, "Advanced Music Synthesizer, CS9203," Crystal Semiconductor Corp., DS117PP1, pp. 1-18 (Aug. 1993).
	CY	Preliminary Product Information, "CDBGMR4 Music Synthesis Eval. Board," Crystal Semiconductor Corp., DS127PP1, pp. 1-24 and schematics (Aug. 1993).
	CZ	Preliminary Product Information, "Programmable Music Processor, CS8905," Crystal Semiconductor Corp., DS116PP1, pp. 1-19 (Aug. 1993).
	DA	Preliminary specification, "Stereo continuous calibration DAC, TDA1545A," Phillips Semiconductors, pp. 4-212 to 4-229 (March 1993).

	DB	Preliminary, "YMF278-F (OPL4), 4 Operator FM and WAVE Synthesis Chip," Yamaha LSI, Yamaha Corp., Catalog No. LS1278F, Version 1.01 (2/1/93), pp. 1-31
	DC	Snell, John. "Design of a Digital Oscillator Which Will Generate Up to 256 Low Distortion Sine Waves in Real Time," April 1977, pp. 4-25
	DD	U.S. Patent Application Serial No. 072,838, entitled "Wave Table Synthesizer," by Travers, et al.
Examiner		Date Considered
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.		

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